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Stock Market Reaction to Seasoned Equity Offerings: The Case of Amman Stock Exchange

رد فعل سوق الأسهم لإصدارات حقوق الملكية الموسمية: حالة بورصة عمان للأوراق المالية

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This Thesis is submitted in Partial Fulfillment of the Requirements for the Degree of Master of Banking and Finance Sciences, Yarmouk University.

April 24, 2014

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April 24, 2014

Dedication

To my Great Father

To my Lovely Mother

To my Family

With LOVE

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Abstract

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The main objective of this study is to investigate the stock market reaction to seasoned equity offerings (SEOs) on the short-run, by looking for any statistically significant abnormal returns around seasoned equity offerings (SEOs) for a sample of Jordanian financial and industrial firms during the period from 2003 to 2012, and whether these returns are positive or negative.

The study uses the stock closing prices for the firms that have seasoned equity offerings (SEOs) for the last eleven days of trading before and after the issuance regardless if the trading were stopped or not. Also, market

returns were used. Event study methodology and cumulative average abnormal return (CAAR) equation have been used to test the stock market reaction to seasoned equity offerings SEOs for a final sample of 50 seasoned offerings. The statistical significance of the results has been tested using both parametric and non-parametric tests.

The study results indicate that there are no statistically significant abnormal returns up to 10 days before and after seasoned equity offering (SEO), however, there is a statistically significant decrease in stock prices up to four days before the issuance. In addition, the study found that there are no significant differences between abnormal returns before and after the event of seasoned equity offering (SEO).

Keywords: Seasoned Equity Offerings (SEOs), Abnormal returns, Amman stock Exchange, Efficient Market Hypotheses.

Chapter One
Introduction

1.1 Introduction.

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Chapter One
Introduction

1.1 Introduction

The main objective of any firm is to maximize shareholders wealth by increasing stock prices. Managers achieve this objective through investing in new projects which can be financed either by debt or equity. In some cases, managers put their personal goals over their corporate goals (agency problem).

Equity can be collected by issuing stocks (preferred stocks or common stocks) to the general public through initial public offering (IPO) or seasoned equity offering (SEO). The issuing of stocks which is conducted in the primary market by firm that have never before sold ownership shares to the public is called initial public offerings (Rose, 2008). Seasoned equity offerings which are known as "follow on offerings" or "secondaries" are additional issuance of stocks, which is also still in the primary market, aims to raise a new equity capital from an established firm whose securities already trade in the secondary market (Brigham, 2011).

Insiders' own profit could be another goal of seasoned equity offering (SEO) rather than value maximization. Insiders can achieve abnormal returns depending on SEO. Researchers argue that SEOs show bad signals about the firm's financial situation. According to Myers & Majluf (1984),

SEOs undertaken for expansion-related purposes should signal negative news because good projects should typically be financed by debt. Overvaluation of stock prices is another negative signal of SEO. Therefore, the main purpose of the study is to find if investors achieve abnormal returns depending on SEOs.

1.2 Objective of the Study

The main objective of this study is to investigate the market reaction to SEOs on the short-run, looking for any statistically significant abnormal returns around SEOs for a sample of Jordanian financial and industrial firms, and whether these returns are positive or negative. Also, find if the market reaction around SEOs anomalous or not.

1.3 Importance of the Study

According to the knowledge of the researcher there is a limited number of studies that investigates the seasoned equity offerings in Jordan (Abu al-hayja, 2005 and Al- Rashdan, 2011), so this study sheds the light on this issue.

This study is important to both managers and investors in the firm. Managers would be interested to know whether SEOs are considered as bad signal of the firm's future investments. Investors also can develop investment strategies accordingly and achieve abnormal returns around SEOs if it is an anomalous phenomenon. Also, the efficiency of the market

will be tested at the semi-strong level by knowing whether the security prices reflect the available information or not.

1.4 Problem of the Study

The problem of this study consists of the following questions:

1. How does Amman stock Exchange market react to SEOs?
2. Are there any statistically significant abnormal returns ten days before and after SEOs?
3. Are these abnormal returns negative or positive?
4. Is the reaction around SEOs anomalous?

1.5 Hypotheses of the Study

Main Hypothesis

There are significant abnormal returns around SEOs.

Sub- hypotheses

H1: There are significant abnormal returns up to 10 days before SEOs.

H2: There are significant abnormal returns up to 10 days after SEOs.

1.6 Sample of the Study

The final sample of this study consists of 34 firms with 50 seasoned equity offerings conducted during the period 2003-2012, where there are 18 financial firms with 25 SEOs and 16 industrial firms with 25 SEOs also.

The data were collected from Amman Stock Exchange website. Cumulative average abnormal return (CAAR) equation is used to test the hypotheses of this study.

1.7 The Structure of the Study

The study will be divided into six chapters; the first one provides an introduction, the second presents the theoretical framework. Previous studies are discussed in the third chapter. The fourth chapter clarifies the data, sample and methodology and the fifth addresses the empirical results and discussion. Finally the sixth chapter contains the summary and recommendations.

Chapter Two

Theoretical Framework

2.1 Introduction.

2.2 Money Market.

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Chapter Two

Theoretical Framework

2.1 Introduction

Financial markets are the heart of the financial system. They are one of the three essential types of markets which work within the global economic system (factor markets, product markets, financial markets).

A pivotal role is played by the financial market within the global economic system. Individuals and institutions that need funds more than their current income resort to financial markets which channel savings to them (Rose, 2008). Financial markets are divided into two types, money market and capital market.

This chapter will introduce the securities market and explains the capital market types, discusses the issuance methods, and shows the development of Amman Financial Market.

2.2 Money Market

Money market is a type of financial markets where temporary surpluses of funds, which owned by institutions and individuals meet the temporary funds shortages of borrowers. The purpose of the money market is enabling economic units to manage their liquidity positions. In this market a security or a loan mature within one year or less. Providing governments with short

term funds and financing the working capital needs of corporations is one of the principal functions of this market (Rose, 2008).

2.3 Capital Market

Capital market is a type of securities markets where investors buy and sell long-term securities (with maturities of more than one year). The main purpose of the capital market is to fund governments, businesses and households' long-term investments. In this market, the financial instruments range in size from small to multimillion dollar with original maturities of more than one year. Capital market is divided into primary market and secondary market (Rose, 2008).

2.3.1 Primary Market

Primary market is one of the parts of capital market where new issuance of securities is sold to the public. Raising financial capital to support new investments is a principal function of this part of capital market. "If you purchase shares of stock just issued by a firm or borrow money through new mortgage to purchase something you will be engaged in a primary market" (Rose, 2008). The issuance of securities in the primary market includes the following types:

1. Public offering

Public offering aims to raise funds for expansion purposes by selling equity shares or other securities to the general public. Public offerings have two classifications of securities; the first one is unseasoned securities where

securities are offered for the first time to the public. The second one is seasoned securities which is an additional issuance of common stock for an existing firm (Fuller and Farrell, 1987).

2. Rights offering

A rights offering is when a firm issues its existing shareholders a right (but not the obligation) to buy additional shares of the firm's stock in proportion to his or her current ownership position at a specific price. The firm will also set a time limit for the shareholder to buy the shares. Often, to encourage existing shareholders, the shares are offered at a discount price to take the firm up on their offer.

If some shareholders do not take the firm up on their rights issue then they have the option to sell their rights in the stock market just as they would sell ordinary shares, however their shareholding in the firm will be weaken (Gitman, 2011).

3. Private placement

Private placement is the opposite of a public issue, in which securities are made available for sale in an open market for the purpose of raising capital. Private placement includes securities which are sold to selected groups without Securities and Exchange Commission (SEC) registration, such as investment management funds, pension funds and insurance firms (Gitman, 2011).

Private placement could be cheaper than public offering because there is no need to extensive and costly registration statements. However, it is not available to the general public, so it will be less suited for very large offerings and it is less liquid and causes a decline in the price that could be paid by public investors (Bodie, 2005).

2.3.2 Secondary Market

Secondary market (aftermarket) is another part of capital market where previously issued securities traded between investors-issuing firms are not involved - at prices specified by supply and demand forces. The role of this type of markets is to provide liquidity to investors and enable them to move quickly from one security to another and from security to cash without a substantial loss in market value (Fischer and Jordan, 1999).

Secondary market is classified into two broad segments: the organized exchanges and the over-the-counter (OTC) market. Brokers (persons act as agents) and dealers (persons act as market makers) are the primary middlemen in the secondary markets.

In organized exchanges which are physical marketplaces, buyers and sellers agents operate through the auction process while other transactions which are not handled on the organized exchanges are called over-the-counter (OTC) transactions since there is no central location for trading occurrence. Instead, a network of brokers and dealers are connected together through telephone or computer terminals (Radcliffe, 1987).

Another essential difference between the organized exchanges and the over the counter markets is that firms first are traded in over the counter till satisfying certain listing conditions, then they will move to the organized exchange, thus, the latter is the formal stock market.

2.3.3 Issuance of Securities

One of the external financing methods to finance the business is issuing new securities (bonds or stocks) for the purpose of capital raising. Firms raise capital for expansion purposes, entering new projects or in order to pay their liabilities (Gitman, 2011).

Two types of issuance will be mentioned below in detail. The first one is the initial public offerings (IPOs) where the securities are issued for the first time, and the second one is the seasoned equity offerings (SEOs) where an established firm offers additional securities.

1. Initial Public Offerings IPOs

The issuing of stocks which is conducted in the primary market by firms that have never before sold ownership shares to the public is called initial public offering (IPO); which is one of the most dynamic services offered by investment bankers (Rose, 2008).

Commonly, IPOs are underpriced if it were compared to its marketed price which could be reflected in price jumps in first day of trading in public security markets (Bodie, 2005).

2. Seasoned Equity Offerings SEOs

Seasoned equity offering (SEO) is an additional issuance of stocks, which is also still in the primary market, aims to raise new equity capital. SEOs is one of the methods to fund existing firms' new projects or expansions (Brigham, 2011), but it could give a negative signal about the financial status of the firm since it can't make an internal financing.

2.4 The Efficient Market Hypothesis (EMH)

A body of theory called the efficient market hypothesis (EMH) is introduced by Fama (1970); it is based on random walk theory which assumes that stock prices reflect any new information immediately. This hypothesis states that: stocks are always in equilibrium and it is impossible for an investor to consistently "beat the market". There are three different forms of EMH, which is based on the availability and cost of information. These three forms are (Haugen, 1987):

1. Weak-Form of Efficiency

According to the weak form of efficiency current market prices reflect all past trading information (past volume trading, price history) that both buyers and sellers have been able to obtain. No one of market participants can earn excess profits beyond the expected using past traded information because all this information is freely available to all.

2. Semi strong-form of Efficiency

According to semi-strong form of efficiency seller or buyer can't find any opportunity to profits by trading on publically available information environment. In other words, this form of efficiency indicates that stock prices reflect all past and publically available information. Furthermore, sellers and buyers are assumed to be rational by using all publically available information to help them value the financial assets. However, insiders (ex. Manager of firm) can earn consistently abnormal returns even under this form by having information that isn't publically available.

3. Strong-Form of Efficiency

According to the strong form of efficiency all public and private information which is relevant to the value of financial instruments is captured by current market prices, even though this information which is possessed by "insiders". So, it's impossible for insiders to earn consistently abnormal returns in the stock market under this form. Although their actions affect stock prices, their information is quickly reflected in these prices.

2.5 Insiders and Insider Trading

Insiders; as officers, directors, and owners of ten per cent or more of the common stock of any firm listed in any market can gain from trading in the securities of their firms (Aboody and Lev, 2000). Perhaps, this could happen in an illegal way at the expense of other investors.

Mangers, officers and even many of firm staff may know special information which isn't available to the public, and which could enable them to benefit from that knowledge, before the public becomes aware of it, by selling or buying the firms' stock (Rose, 2008).

Jaffe (1974) examines trading of insiders at different dates on 200 NYSE stocks between 1962 and 1968. He attempts to examine short- and long-run movements of stock prices at three dates subsequent to an insider trade by calculating cumulative average residual returns. He finds that in the first two months following the date of insider trade CAAR increased approximately by 1% and after eight months reached a level of approximately 5%. So, this give evidence that insiders have information enabled them to make profit (Radcliffe, 1987).

2.6 Mechanisms of Offering

1. Underwriting

Underwriting is a mechanism used by investment bankers to issue securities. It is a sort of contract whereby some companies, firms or individuals give guarantee to the firm, that in case the issue of shares or debentures is undersubscribed, they will take up that unsubscribed portion on the same terms as applicable to the public. Thus, the underwriting is like an insurance or guarantee given by the underwriters to the firm that the shares or debentures offered to the public will be fully subscribed, they also

charge some commission mostly calculated on the issue price of shares and debentures (Radcliffe, 1987).

2. Best Effort

Best effort is also a mechanism used by investment bankers to issue security. It is a contract between the issuing firm and its investment banker, in which the issuing firm agree on a minimum and maximum number of shares to be sold at specific offer price. The investment banker makes its "best effort" to sell the shares to investors. Thus the investment banker is not obligated to buy any of the unsubscribed portions of the issue. It sells stocks as much as it can.

A specified period of time, usually 90 days, will be required to sell the minimum number of shares at the offer price. If the shares are not sold, the offer is canceled, and the investors' money is refunded, with the issuing firm receiving no money (Ritter, 1987).

2.7 The Explanations of the Discount around SEOs

When capital is raised through SEOs the firms incurred an implicit cost, the price discount, and that is well documented. Measured as the relative difference between the last close price before the offer announcement and the offer price, the SEO price discount is found to be around 3% (Mola and Loughran, 2004) for US public offerings, 17% for insured rights issues in Britain (Slovin *et al*., 2000), and 19% for Australian rights issues (Owen

and Suchard, 2008). Existing literature identifies several reasons, including signaling theory, stock illiquidity and investor sentiment, for the existence of SEO price discount.

1. Signaling Theory

Modigliani-Miller (M&M) assume that the same information is available to both managers and investors about a firm's prospects, which is called symmetric information but in fact managers have more accurate information than outside investors, here we face an asymmetric information case which has an important effect on the optimal capital structure.

According to the signaling theory the equity financing is considered as a bad signal so that the discount around SEOs maybe explained by this theory.

2. Stock Illiquidity

Amihud and Mendelson (1986) conduct a research in microstructure and find that illiquidity is an important factor in equity pricing. They show that firms with illiquid stocks have a larger SEO price discount than liquid stocks since it is more costly and harder to subsequently sell. Using the bid-ask spread as a liquidity proxy, Corwin (2003) and Butler *et al*. (2005) report that, in the United States, costs of raising seasoned equity capital are indeed higher for stocks with greater illiquidity.

3. Investor Sentiment

Investor psychology and behavioral biases are another factor that influences the asset pricing. This model suggests that when investor sentiment is high, the SEO price discount tend to be low (the so called "hot" markets). As a result, in order to take advantage of higher investor sentiment firms can rationally time their capital raising activities to achieve better issue prices during "hot" markets (e.g. Ljungqvist *et al.*, 2006). Many empirical studies along this line focus on long-run performance metrics, and argue that the negative abnormal returns of SEO firms in the long-run indicate overpricing of SEOs at issuance (e.g. Loughran and Ritter, 1997). Consistent with the behavioural argument, Chiu (2006) reports a positive relation between investor sentiment and the number of SEOs.

2.8 Amman Stock Exchange

1. Establishment of the Amman Financial Market

Public shareholding firms were set up and their shares were traded in, long before the setting up of the Jordanian Securities Market. In the early thirties, the Jordanian public already subscribed to and traded in shares.

As a result, an unorganized security market has emerged in the form of non-specialized offices. This prompted the government to contemplate the idea of setting up a market to regulate issuance of and dealing in securities,

in a manner that would ensure safe, speedy and easy trading, and protect small savers, through a mechanism that would define a fair price based on supply and demand. Such a market was perceived as a creator of and caterer for much needed opportunities for economic growth which would stimulate and spurt economic activity. These joint efforts bore their fruit, and Temporary Law No. 31 of the year 1976 was promulgating, and what was known as Amman Financial Market was consequently established.

The Law laid out the objectives of AFM as follows: to mobilize savings by encouraging investment in securities; thereby channeling savings to serve the interests of the national economy; to regulate issuance of and dealing in securities in a manner that would ensure the soundness, ease and speed of transactions to safeguard national financial interests and to protect small savers; and to provide the necessary data and statistics to achieve AFM objectives.

As of its inception, AFM was entrusted with a dual task, namely the role of a Securities and Exchange Commission (SEC) and the role of a traditional Stock Exchange.

Since then and up to the founding of Amman Stock Exchange, a lot has been achieved. Trading on the Secondary Market rose from JD286 million in 1978 to JD2.0 billion in 2012; market capitalization of subscribed shares is currently around JD19.1 billion, as compared to around JD286 million by

the end of 1978; and the number of listed firms went up from 66 in 1978 to 243 by the end of 2012 (www.ase.com.jo).

2. Major developments of the Jordanian Capital Market

The Jordanian government adopted a comprehensive capital market reforming policy, which aimed at building on the previous 20 years' experience, boosting the private sector, expanding and diversifying the national economy, and improving regulation of the securities market to reach international standards. Among the most important features of the new orientation were institutional changes in the capital market, use of international electronic trading, settlement and clearance systems, elimination of obstacles to investment, and strengthening capital market supervision to reach optimum transparency and safe trading in securities, in line with globalization and openness to the external world.

The enactment of the Temporary Securities Law, No. 23 of the year 1997, was a landmark; indeed, it was a qualitative leap and a turning point for the Jordanian capital market. Its aim was to restructure and regulate the Jordanian capital market, and to complete its infrastructure in consistence with international standards, in order to secure transparency and safe trading in securities. The central feature of this restructuring effort was the separation of the supervisory and legislative role from the executive role of the capital market. The latter was left to the private sector, whereby

Amman Stock Exchange/ Securities Market (ASE) and the Securities Depository Center (SDC) played the executive role, and the supervisory and legislative role was entrusted to Jordan Securities Commission (JSC). The Law provided for setting up three new institutions to replace AFM, namely:

1. Jordan Securities Commission (JSC): It is a non-profit legal entity that is mainly specialized in recording and transferring ownership of stocks.
2. *Amman Stock Exchange* (ASE): It is a non-profit legal entity, with financial and administrative autonomy, and it is authorized to act as an organized market for trading in securities in the Kingdom. Its membership is made up of financial brokers, and it is managed by the private sector. It has started its operations on March 11, 1999.
3. *Securities Depository Center* (SDC)

It is a nonprofit legal entity, with financial and administrative autonomy, and is managed by the private sector. In 2002 a new Securities Law number 76 has been issued which authorized setting up other stock exchanges and allowed forming an independent investor protection fund, stricter ethical and professional codes, and a more stringent observance of the rule of law (www.ase.com.jo).

3. Establishment of the Amman Stock Exchange

The Amman Stock Exchange (ASE) was established on March 11.1999, as a result of the restructuring process of the Jordan Capital Market. The

three institutions established include the Amman Stock Exchange, Jordan Securities Commission (JSC) and the Securities Depository Center (SDC).

The ASE, a private sector, non-profit organization with legal and financial independence, is in charge of running the market. A similar private sector, non-profit organization, the SDC, oversees settlements and maintenance of ownership records. Regulation is in the hands of a government body, the JSC, which has clearly defined powers to develop and monitor the market. The ASE observes international standards of fair practice in the orderly transaction conduct of the market.

The Amman Stock Exchange has two separate tiers of stocks that are traded. The two-tier system was established, so that an investor can readily know the status of the firm he wants to invest in and the requirements it has fulfilled. It also promotes the transparency of the ASE and the firms traded on the stock exchange.

There are certain strict requirements that must be met before a firm can be listed in the first market of the ASE. Those requirements include, the firm must have made a pre-tax profit for at least two out of the three years before being listed. Also the firm must fulfill certain requirements concerning the free-float and number of shareholders in the firm. In addition, investors must be able to easily sell their stocks through the stock exchange. Firms can list their shares at the second market as soon as they

obtain the right to start their operations from the Ministry of Industry and Trade.

Securities are electronically traded on the ASE. With a capitalization of more than JD19.0 billion, the ASE is one of the largest stock markets in the region that permits foreign investment. The exchange for the year 2012 has more than 780,000 shareholders, 48.3% of the shares are held by Jordanian corporate and individual investor, foreign investors account for 51.7% of share ownership (www.ase.com.jo).

4. Jordan Securities Commission

It aims at supervising the issuance of and dealing in securities, regulating and monitoring the activities and operations of those organs falling under its supervision. It also aims at regulating and supervising the disclosure of information related to securities, issuers, insider trading and major shareholders.

JSC has financial and administrative autonomy, and is directly attached to the Prime Minister, which would enhance its future role, and would enable it to effectively assume its supervisory role over the capital market. It has a Board of Commissioners, composed of five full-time members, which is entrusted with the following functions: drawing up draft laws and regulations on securities; approving the by-laws and regulations of the SDC and ASE; granting licenses issued under the Law; setting limits for commissions of financial services firms and members of the SDC; and

adopting accounting and auditing standards for the organs falling under its supervision as well as standards for their qualified auditors (www.ase.com.jo).

5. Securities Depository Center

SDC was established on May 10, 1999 with the aim of ensuring safe custody of ownership of securities; registering and transferring ownership of securities traded on ASE; and settling the prices of securities among brokers. It is a nonprofit legal entity, with financial and administrative autonomy, and is managed by the private sector (www.ase.com.jo).

Chapter Three

Previous studies

3.1 Introduction.

3.2 Previous Studies.

3.3 What Distinguishes this Study?

Chapter Three

Previous studies

3.1 Introduction

Many previous studies highlighted seasoned equity offerings (SEOs) issue by studying the impact of these SEOs on the firms which conducted them in different stock market exchanges and at different periods of time.

This chapter discusses some of the previous studies which are related to seasoned equity offerings (SEOs) topics.

3.2 Previous Studies

Teoh *et al.* (1998) examine whether pre-issue earnings management explains the long-term underperformance of seasoned equity issues by using a sample consisting of 1265 offerings in USA during the period 1970-1989. They run cross-sectional regressions to measure the incremental predictive power of post-issue returns by pre-issue accruals pertaining to periods of seasoned equity offerings. They find that issuers who adjust discretionary current accruals to report higher net income prior to the offering have lower post-issue long-run abnormal stock returns and net income. It's interesting to notice that the relation between discretionary current accruals and future returns (adjusted for firm size and book-to-

market ratio) is stronger and more persistent for seasoned equity issuers than for non-issuers.

Brav *et al*. (2000) investigate the robustness of the long-run underperformance of initial public offering (IPO) and seasoned equity offerings (SEOs) firms from 1975-1992 using Fama-French model and calculating cumulative abnormal returns (CARs) for a sample of 4526 offerings in USA. The study shows that IPO firm returns are similar to size and book-to-market of firms that have not issued equity. Value weighted portfolios of SEOs firms show small economic underperformance.

Denis and Sarin (2001) examine the reaction of the stock price to earnings announcements for five years following the SEOs. Their sample consists of 1213 offerings for industrial firms in USA over the period 1982 to 1990. Abnormal returns are computed as the difference between the return of the sample firm and the return on the matched control firm. Also, they used sensitivity, cross-sectional and time series tests. They find negative long-run abnormal return after SEO, statistically significant difference in SEO returns of issuers during earnings announcement periods which is below those of the control firms during their earnings announcement periods and the earnings announcements effects are statistically insignificant. Furthermore, there is no evidence of an association between earnings announcement effects and the frequency of seasoned equity issues.

Clarke *et al*. (2001) examine the long-run performance and insider trading around canceled and completed seasoned equity offerings (SEOs) using market-to-book ratios and by comparing insider trading before and after SEOs. Their sample consists of 3266 canceled and completed offerings in USA between 1984 and 1996. They find that completed and canceled offerings exhibit similar abnormal stock performance around their filing. Completed SEOs exhibit no significant abnormal performance between the filing and offering dates, whereas canceled SEOs experience a significant abnormal performance. The long-run performance after cancellation is not significant.

Pontiff and Schill (2002) aim to assess return behavior after seasoned equity offerings by choosing a sample of 5303 offerings which include all primary U.S. common seasoned equity offerings from January 1970 to December 1995 in USA using CAPM model and Fama-French model and they find that firms that conducted seasoned equity offerings are overpriced.

Eberhart and Siddique (2002) test the efficient market hypothesis (EMH) by examining the long-term performance of firms' bonds and stocks following SEOs by implementing abnormal return equation and skewness on a sample of 1368 offerings in USA during the period from 1980-1992. Their results are inconsistent with the EMH and provide evidence that SEOs transfer wealth from shareholders to bondholders

because SEOs reduce default risk. They also find significantly negative abnormal stock returns. They find evidence of a five-year delayed (positive) response in bond returns following SEOs issuances. Moreover, they found that firms' raw bond returns are generally greater than raw stock returns.

Li and Zhao (2003) implement the propensity score matching method and book-to-market ratio to investigate various markets and accounting variables that affecting both; firms' SEOs decision and their long-run stock performance. The sample consists of 5399 offerings in USA during the period from 1986 to 1998. The results show that even under the equal-weighting and buy-and-hold method, the long-run abnormal returns after SEOs disappear.

Clarke *et al*. (2004) examine long-run stock and operating performance following SEOs. Their sample consists of 424 pure secondary offers in USA during the period 1980 to 1996. They used market-to-book ratio and non-parametric test; they find a negative significant abnormal return in both 3 and 5 year post-issue (when the seller can be classified as an insider). Also, the operating performance declines subsequent to the issue. Furthermore, there are positive insignificant abnormal returns following SEOs. When they compare insiders with non-insiders SEOs, they find that insiders' offer experience a decline in the post-issue period relative to non-insiders, and there is a significant negative abnormal performance from the

pre-issue to the post-issue period for the insider group which does not exist in the non-insiders group.

A study of our local market, Abu-Alhayja (2005) aims to detect the impact of announcements of SEOs on stock prices. Thus, she estimates the short run performance using market model, average abnormal return (AAR) and cumulative abnormal return (CAR) equations on a sample of 92 SEOs covering the period from 1992 to 2003 in Jordan. The study finds a statistical significant decline of the stock prices of the issuing firms up to 4 days before and after the announcement day. Furthermore, there is a significant relationship between the issuance of SEOs and the abnormal rate of return, and a significant relationship between the issuance of SEOs and the unsystematic risk.

Pastor and Poveda (2005) investigate whether pre-issue earnings management can explain the poor stock price performance of firms that raise capital through seasoned equity offerings in Spain by using Jones model and Poveda model. Their sample consists of 408 offerings during the period from January 1991 to December 2002. This study verifies that discretionary accruals grow before the issue, peak in the offering year and decline thereafter. And find a positive relationship between the reversion in discretionary accruals and abnormal returns during the years following the equity issue.

Purnanandam and Swaminathan (2006) examine whether the market underreacts to the negative information implicit in SEOs announcements by implementing cross sectional regression, CARs equation and different financial ratios on a sample of 1967 offerings from 1978 to 2000 in USA. The results show that the market underreacts to SEOs announcements. Overvalued SEOs experience a smaller decline in market value on the SEOs announcement day but experience a larger decline over the next 5 years.

Kim and Purnanandam (2006) make an empirical assessment of the relative importance of the three theoretical explanations [signaling effect; Leland and Pyle (1977), adverse selection problem; Myers and Majluf (1984), agency problems; Jung, Kim, and Stulz (1996)] for the negative investor reaction to SEOs. It also investigates the circumstances under which they affect and interact in pricing newly issued shares. They used a regression model and CARs equation on sample of 597 offerings in USA and cover the period 1994-2003. They find that pure signaling effects and agency problems exhibit significant explanatory power, and conclude that adverse selection problems seem to be a second order of importance for relatively large firms.

Li and Zhao (2006) examine the SEOs underperformance anomaly by implementing the propensity score matching method on a sample of 5399 offerings in USA during the period from 1986 to 1998. They find that the

abnormal returns after SEOs are not significantly different from zero. Their results show that the apparent underperformance reflects poor matching methods rather than an anomaly challenging the efficient market hypothesis.

Ching *et al*. (2006) examine the use of discretionary current accruals by firms that make seasoned equity offers (SEOs) by implementing cross sectional regression on a sample of 777 offerings in China during the period from 1993-2000. They find evidence suggesting that firms borrow future income to manage earnings in pre-issue years and consequently earnings decrease in post-issue year 2. However, they found no evidence that pre-issue discretionary accruals affect future stock returns. Also they found evidence that family-owned firms are more likely to use positive discretionary accruals prior to making SEOs.

Chemmanur *et al*. (2009) aim to distinguish between two roles of institutional investors; investors who possess private information about SEOs use it to trade in a direction opposite to this information (manipulative trading role); investors who possess private information about SEOs use it to trade in the same direction (information production role). The sample of the study includes 786 offerings in USA from 1999 to 2005. To achieve the goal of the study they used Least Square regression and Tobit regression. They find that institutions are able to identify and obtain more allocations in SEOs with better long-run stock returns, they

trade in the same direction as their private information, and their post-SEO trading significantly outperforms a naive buy-and-hold trading strategy.

Hertzel and Li (2010) examine the extent to which investment opportunities and/or mispricing motivate equity issuance and contribute to post-issue stock underperformance using market-to-book ratio on a sample includes all firms in USA that conduct SEOs over the period 1970–2004, and they find that issuing firms are both, overvalued and have greater growth opportunities relative to non-issuers.

Shahid *et al.* (2010) examine the stock price reaction to the announcement of different equity issues in China by calculating daily abnormal returns and CARs for a sample of 565 offerings of rights offerings and 152 observations of seasoned public offerings for the period of 1998-2008. They obtain significantly positive average abnormal returns (AARs) in the preannouncement period, and there is an observation of negative but insignificant (AARs) on event date. No abnormal performance is detected on and after board of directors (BOD) date, except on day 2. Results show positive but insignificant cumulative abnormal returns (CARs) for different event window periods around BOD meeting date. For firms who use public offerings (IPOs), average abnormal returns (AARs) in preannouncement period are positive and significantly different from zero but on the announcement date they are negative and highly significant.

Bayless and Jay (2011) aim to find an appropriate way to evaluate the firm performance after its seasoned equity offering compared to other times using different financial ratios on a sample consists of all SEOs in USA that included at least some primary shares made during the period from 1969 to 2006. They compare performance around SEOs with performance at other times. They find that operating performance in the 2 year period prior to issue is significantly below recent historical norms. Issuing firms have experienced a significant decline in property, plant, and equipment relative to assets and in market leverage by the time of issue and that issue takes place after a period when GDP growth is relatively high and default risk premium is low.

Huang and Zhang (2011) examine how the marketing efforts of investment banks could help issuing firms in SEOs by implementing Least Square regression on a sample of 2281 offerings in USA from 1995 to 2004. They show that the marketing of securities is important to issuers, and the number of managing underwriters for SEOs is negatively related to the offer price discount and larger investor networks of co-managing underwriters also lower offer price discounts. Furthermore, they provide evidence that is supportive to the marketing hypothesis: The underwriters' marketing efforts can lower the offer price discount by shifting up and flattening the demand curve of an SEO.

Lerskullawat (2011) examine the performance of 126 SEOs firms in Thailand between 1999-2006 by applying an event study framework (15 days before and after the event) and a standard ordinary least squares (OLS) regression. Abnormal returns also calculated on the basis of the market model. The study finds that the stock prices have negatively reacted to SEOs announcements and there is no relationship between short- and long-term abnormal returns. Furthermore, the findings suggests that SEOs firms underperform during the post issuing period, particularly after one year of issuing new shares.

In a recent local study, Al-Rashdan (2011) examines the behavior of long run operating performance of seasoned equity offerings (SEOs) of 40 industrial firms in Jordan during the period from 1997 to 2006, by using Wilcoxon test, Least Square regression, Random Effects model, and different financial ratios. Also, the study investigates whether the long run operating performance of SEOs differs between industry subsectors and between firms with different sizes. The study finds that the long run operating performance of industrial Jordanian firms who conducted SEOs decline after the issue, and the operating performance differs when analysis is conducted for different sub sectors. Furthermore, the study finds that large firms operating performance is better than that for small firms.

Hull *et al*. (2012) investigate the influence of both the level of inside ownership and the change in this ownership level on short and long-run

returns around SEOs within a regression framework by conducting Pearson and Spearman correlations tests and by using a regression model to calculate short and long run abnormal returns. Their sample contains 706 offerings covers the period from 1999-2005 in USA. They find that the level of inside ownership is a consistent factor in accounting for both short-run and long-run returns surrounding SEOs.

Rubalcava (2012) examines the impact of the Sarbanes-Oxley Act of 2002(SOX) on the valuation of seasoned equity offerings (SEOs) by Canadian cross-listed firms in the U.S by implementing a regression analysis CARs equation. The overall sample for this study consists of 252 offerings in Canada (domestic) and globally (global), by Canadian issuers cross-listed issued during the period from May 1995 to July 2008. The study finds that the market reaction to SEOs announcements of Canadian cross-listed firms is negative and is highly significant. Also, the determinants of the market reaction to SEOs announcements are completely different between the pre-and-post-SOX periods.

3.3 What Distinguishes this Study?

There are few researches conducted in the Jordanian market about SEOs, and according to the researcher knowledge, only two studies (Abu AlHayja, 2005 and Al-Rashdan, 2010) investigated the performance of seasoned equity offering in Jordan. Abu-AlHayja (2005) estimates the short

run performance of SEOs firms for all market sectors and uses price reaction and beta to estimate the performance. Al-Rashdan (2010) investigates the long-run operating performance after equity offering for only industrial Jordanian firms and the effect of the long-run performance of SEOs on industry sub sector and firms' size. Therefore, this study sheds light on this important issue and will investigate the abnormal return around seasoned equity offerings SEOs for financial and industrial Jordanian firms in the short run. Thus, it focuses on the issuing date rather than the announcement date of SEOs. Moreover, it is applied on more recent period and tries to explain the anomalous reaction to SEOs if found.

Chapter Four

Data and Methodology

4.1 Introduction.

4.2 Data and Sample.

4.3 Hypotheses.

4.4 Methodology.

Chapter Four

Data and Methodology

4.1 Introduction

This chapter explains the process of collecting data and describes the methodology used in examining cumulative abnormal returns that may exist around seasoned equity offerings on the short-run. The chapter consists of two sections; the first explains the procedure of data collection and the used sample in this study while the second presents the methodology that has been used to test the cumulative abnormal return (CAAR).

4.2 Data and Sample

This study aims to test if there are any statistically significant abnormal returns around SEOs on the short-run for financial and industrial Jordanian firms which are listed in Amman stock exchange (ASE) during the period from 2003 to 2012.

The data are collected from ASE database. Issuing dates of SEOs were determined by adding fifteen days to the date of adoption by the decision of the Board of Commissioners of Jordan Securities Commission according to 2005 instructions of financial services licensing and registration.

The study uses the stock closing prices for the SEO firms for the eleven days before and after the issuance regardless if the trading were stopped or not. Also, market returns were obtained from ASE database. Returns of SEO firms were compared to the market return in these days (± 10) to find if there is a return which is greater than the market return (abnormal return) or not.

The population of this study contains all firms listed in Amman Stock Exchange. The sample of this study contains all firms in both the financial and industrial sector (113 firms: 72 financial firms and 41 industrial firms) which are listed in the Amman Stock Exchange (ASE) during the period 2003-2012. We perform a filtering process to choose our sample. The SEO should satisfy the following conditions in order to be included in our sample:

1. At the time of the offering the issuing firm must be listed in Amman stock exchange (ASE).
2. The issuance must be for an already existing firm (first time issues are excluded).
3. The offering is not only for Common Stock (also capital capitalization and strategic partners are included).
4. Even though, if the trading were stopped around the day of issuing, we take the available trading prices before and after the issuance.

After this filtering process we got a sample of 18 out of 72 financial firms and 16 out of 41 industrial firms that conducted SEOs. The industrial sector has the higher percentage of issuance (39%). The following table illustrates the percentage of issuing firms.

Table (4.1)
No. of Issuing Firms and its Proportion to the Total Number of Firms during 2003-2012

Sector	Total No. of firms	No. of issuance firms	% of issuing firms
Financial	72	18	25%
Industrial	41	16	39%
Total	113	34	30%

The observations which matched with our constraints resulted in a final sample of 50 seasoned equity offerings equally weighted between the two sectors (financial and industrial), 50% for each. These SEOs are conducted by 18 financial firms and 16 industrial firms (25 of them at the financial sector and 25 at the industrial sector). There are no SEOs in 2003, 2004 and 2010. Most of SEOs conducted in 2005 and 2006 (29 SEOs). 2005 has the largest share of offerings; 12 issuing firms with 18 offerings which represent 36% of all offerings in this study, followed by the year 2006 with 22%. The following table illustrates the sample in details.

Table (4.2)
Issuances According to Years and Sectors

YEAR	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total SEOs/ sector
# of Financial Sector SEOs	0	0	8	5	3	4	1	0	2	2	25
# of Industrial Sector SEOs	0	0	10	6	2	4	2	0	1	0	25
Total SEOs/ year	0	0	18	11	5	8	3	0	3	2	50
% of SEOs/year	0	0	36%	22%	10%	16%	6%	0%	6%	4%	100%
# of issuing firms	0	0	12	9	5	7	3	0	3	2	

4.3 Hypothesis of the Study

Main Hypothesis

There are significant abnormal returns around SEOs.

Sub- hypotheses

H1: There are significant abnormal returns up to 10 days before SEOs.

H2: There are significant abnormal returns up to 10 days after SEOs.

4.4 Methodology

The methodology in this study depends on an event study in order to determine the abnormal returns around the event day which is the issuance of SEOs. This is similar to Abu-Alhayja (2005), Shahid *et al*. (2010) and Lerskullawat (2011) studies.

1. Event-Study

Event-study is one of the most used tools in financial research; it is concerned about measuring abnormal return around a specific date (ex. Announcement Date, Issuance Date). So, it will be used in this study to measure the abnormal return around SEOs.

"Using financial market data, an event study measures the impact of a specific event on the value of a firm. The usefulness of such a study comes from the fact that, given rationality in the marketplace, the effects of an event will be reflected immediately in security prices. Thus a measure of the event's economic impact can be constructed using security prices observed over a relatively short time period. Event studies have a long history. Perhaps the first published study is James Dolley (1933)." (Mackinlay, 1997)

2. Identification of Time Parameter

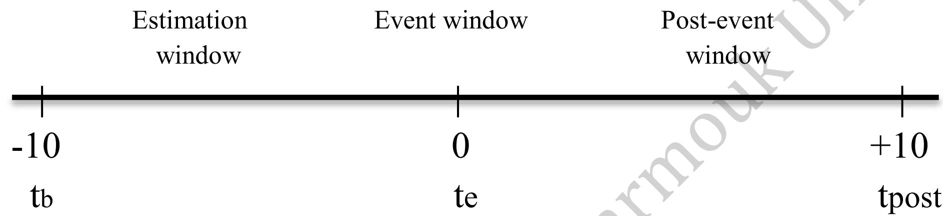
A standard event-study is used to measure the average impact of SEOs on stock prices for Jordanian financial and industrial sector, where day 0 is the issuance date.

If there is no event occurs, predicted or normal returns for any securities are expected to be observed, these normal returns generally are estimated over a time period immediately surrounding the event date.

For measuring and analyzing abnormal return in this study, the estimation period is presented in a form of pre- and post-event period. The

time line for this study is illustrated in figure 4.1, employing a period prior and after the event (issuance date).

Figure (4.1)
Study Time Line



Where:

t_b: the first period used in the calculation of abnormal return.

t_e: the date of offering.

t_{post}: the last period used in the calculation of abnormal return.

The t_b and t_{post} are selected (-10 and +10) so that any detected changes on stock prices are expected to occur during this period (Lerskullawat 2011).

Daily returns for all the events within the research window are calculated as follows (Purnanandam and Swaminathan 2006):

$$R_{it} = \ln\left(\frac{P_t}{P_{t-1}}\right) \qquad (1)$$

P_t: is the closing price of the stock at day t.

P_{t-1}: is the closing price of the stock at day t-1.

Daily abnormal returns are calculated by subtracting the actual return for the stocks of issuing firm from the market return (Denis and Sarin 2000, Eberhart and Saddique 2002).

$$AR_{it} = R_{it} - R_{mkt,t} \qquad (2)$$

AR_{it}: abnormal return of stock i at time t.

R_{it}: return on stock i at time t.

$R_{mkt,t}$: return on market index at time t.

Cumulative abnormal return (CAR) for a certain period is computed by adding daily abnormal returns (Brav *et al.* 2000, Shahid *et al*. 2010).

$$CAR_{it} = \sum_{i=1}^{t} AR_t \qquad (3)$$

Average cumulative daily abnormal return for all SEOs is calculated by averaging all the CARs on that day as follows (Rubalcava 2012):

$$CAAR_t = 1/N \sum_{i=1}^{n} CAR_t \qquad (4)$$

n: number of SEOs.

The statistical significance of the CAARs will be tested using both parametric and non-parametric tests. The parametric test is the t-test. On the other hand we use several non-parametric tests assuming non-normality of our data, these tests are:

1. Wilcoxon/ Mann-Whitney.
2. Wilcoxon/ Mann-Whitney (tie-adj.).
3. Med. Chi-square.
4. Adj. Med. Chi-square.
5. Kruskal-Wallis.
6. Kruskal-Wallis (tie-adj.).
7. Van der Waerden.

Chapter Five

Empirical Results

5.1 Introduction.

5.2 Descriptive Statistics.

5.3 Abnormal Return before and after SEOs.

5.4 Evaluating CAARs before and after SEOs

5.5 Comparison with Previous Studies.

Chapter Five

Empirical Results

5.1 Introduction

This study aims to find if there are any statistically significant abnormal returns around Seasoned Equity Offerings (SEOs) by using CAAR equation. Therefore, this chapter presents the results of the statistical analysis of the study into two parts; the first discusses the first sub hypothesis while the second discusses the second sub hypothesis.

5.2 Descriptive Statistics

Table 5.1 presents the descriptive statistics of the CAARs up to 10 days before SEOs. The mean CAARs are positive in day 10 and day 9 before the issuance with values of 0.0026, 0.0042 respectively. However, they show negative means in days 8 to 1 before the issuance.

The maximum CAAR ranged from 0.0483 in day 10 to 0.1424 in day 1 before the issuance. The minimum CAAR ranged from -0.0500 in day 10 to -1.1874 in day 3.

Table 5.2 presents the descriptive statistics of the CAARs after SEOs. The mean CAARs are positive after the issuance in day 1, 2, 3, 7 and 10 with values of 0.0035, 0.0052, 0.0006, 0.0008 and 0.0054 respectively.

However, they show negative means in days 4, 5, 6, 8 and 9 after the issuance.

The maximum CAAR ranged from 0.0483 in day 1 to 0.1424 in day 10 after the issuance. The minimum CAAR ranged from -0.0500 in day 1 to -1.1874 in day 8.

(Table 5.1)
Descriptive statistics of the CAARs up to 10 days before SEOs

	Day -10	Day -9	Day -8	Day -7	Day -6	Day -5	Day -4	Day -3	Day -2	Day -1
Mean	0.0026	0.0042	-0.0022	-0.0070	-0.0074	-0.0098	-0.0432	-0.0444	-0.0160	-0.0197
Median	-0.0008	-0.0009	-0.0054	-0.0027	-0.0069	-0.0045	-0.0092	-0.0049	-0.0057	-0.0075
Maximum	0.0483	0.0831	0.0761	0.0817	0.0982	0.0575	0.0879	0.0862	0.0806	0.1424
Minimum	-0.0500	-0.0517	-0.0766	-0.1152	-0.0929	-0.1098	-1.1597	-1.1874	-0.1600	-0.1920
Std. Dev.	0.0237	0.0308	0.0346	0.0401	0.0409	0.0363	0.1704	0.1759	0.0461	0.0545

Table (5.2)
Descriptive statistics of the CAARs up to 10 days after SEOs

	Day +1	Day +2	Day +3	Day +4	Day +5	Day +6	Day +7	Day +8	Day +9	Day +10
Mean	0.0035	0.0052	0.0006	-0.0051	-0.0048	-0.0059	0.0008	-0.0622	-0.0662	0.0054
Median	0.0016	0.0027	-0.0011	-0.0057	-0.0005	-0.0073	0.0008	-0.0007	-0.0038	0.0037
Maximum	0.0657	0.1108	0.0978	0.0936	0.1063	0.1005	0.0874	0.1006	0.0872	0.1138
Minimum	-0.0607	-0.0614	-0.0918	-0.3291	-0.2609	-0.0915	-0.1034	-2.6837	-2.7154	-0.0786
Std. Dev.	0.0292	0.0417	0.0408	0.0625	0.0530	0.0298	0.0344	0.3894	0.3936	0.0362

5.3 Abnormal returns before and after SEOs

Table 5.3 presents the CAARs up to 10 days before the SEOs. According to the results of the analysis, we can notice that the CAARs in days 10 and 9 before the issuance are positive and have the values of 0.0026 and 0.0042 respectively. Furthermore, there is a negative significant CAAR (-.0432) in the fourth day before the issuance according to sign-test (normal approximation), Wilcoxon and Van der Waerden tests. Also, in day three before issuance a negative significant CAAR (-.0444) exists according to Wilcoxon and Van der Waerden tests.

As well, there are negative significant CAARs in days 2 (-.016) and 1 (-.0197) before issuance according to t-test, Wilcoxon and Van der Waerden tests. So we notice that there is a discount in stock prices up to 4 days before the issuance. According to these results, the sub hypothesis one which states that "there are significant abnormal returns up to 10 days before SEOs" will be rejected.

Table 5.4 presents the results of the CAARs up to 10 days after SEOs. With regard to the period after issuance there are positive insignificant CAARs in days 1, 2, 3, 7 and 10 which have the values of 0.0035, 0.0054, 0.0006, 0.0008 and 0.0054, respectively. The parametric test which assumes normality shows that there are no abnormal returns around SEOs in the short-run. Also, the non-parametric test which assumes non-normality shows the same result. So, the second sub hypothesis which

states that "there are significant abnormal returns up to 10 days after SEOs" will be rejected.

Table (5.3)
CAARs before SEOs

	Day -10	Day -9	Day -8	Day -7	Day -6	Day -5	Day -4	Day -3	Day -2	Day -1
CAAR	0.0026	0.0042	-0.0022	-0.0070	-0.0075	-0.0098	-0.0432	-0.0444	-0.016	-0.0197
t-test	0.7830	0.9676	-0.4396	-1.2308	-1.2859	-1.9026	-1.7941	-1.7835	-2.4598*	-2.5521*
Sign test (normal approximation)	0.0000	0.2857	0.8571	0.8571	1.2728	1.8385	2.6870*	0.9899	1.2728	1.8385
Wilcoxon	0.6068	0.2686	0.4874	1.2235	1.4770	1.7955	3.0311*	2.1816*	2.0851*	2.8284*
van der waerden	0.6330	0.5746	-0.4196	-1.2849	-1.3751	-1.8809	-3.0394*	-2.4390*	-2.2599*	-2.8158*

*: Significant (probability less than or equal 5%)

Table (5.4)
CAARs after SEOs

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
CAAR	0.0035	0.0054	0.0006	-0.0051	-0.0048	-0.0059	0.0008	-0.0622	-0.0662	0.0054
t-test	0.8475	0.8742	0.1062	-0.5743	-0.6339	-1.3999	0.1600	-1.1299	-1.1895	1.0574
Sign test (normal approximation)	0.4243	0.9899	0.4243	1.5556	-0.1414	1.2728	0.1414	0.1414	0.7071	0.1414
Wilcoxon	0.5792	0.5792	0.0097	0.7916	0.2993	1.7859	0.0579	0.0290	0.6661	0.7626
van der waerden	0.7468	0.7269	0.0986	-0.4739	-0.3324	-1.5814	0.1622	-0.2169	-0.7365	0.8891

5.4 Evaluating CAARs before and after SEOs

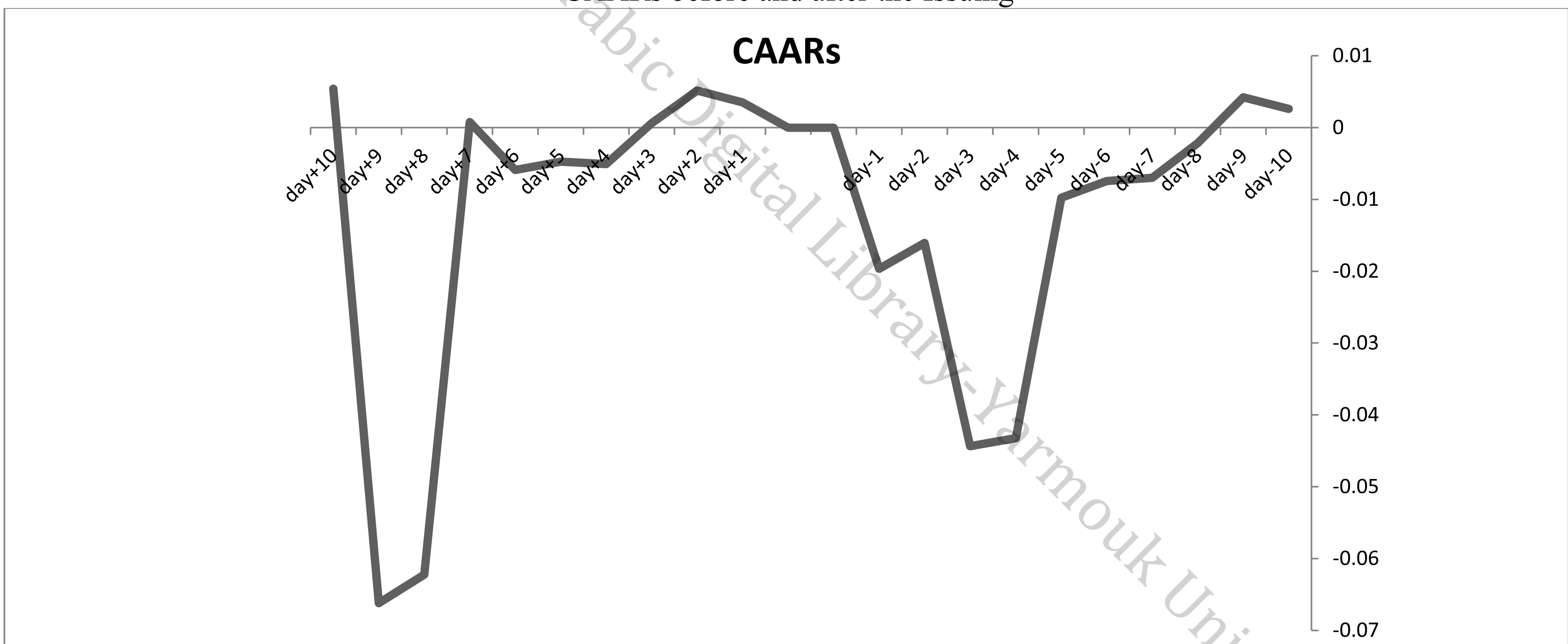
Table 5.5 reports the results of equality test between the CAARs before and after SEOs. Generally, the equality tests show that there is no statistically significant difference between CAARs before and after the SEOs, which means that insiders don't work for their own profit and all information are available to the public. Thus, the Jordanian market is an efficient market, at least around the period of SEOs.

Table (5.5)
Equality Tests of CAARs before and after SEOs

Parametric test	Value
t-test	0.137687
Anova F-statistic	0.018958
Non-Parametric test	
Wilcoxon/Mann-Whitney	1.171690
Wilcoxon/Mann-Whitney (tie-adj.)	1.171690
Med. Chi-square	3.200000
Adj. Med. Chi-square	1.800000
Kruskal-Wallis	1.462857
Kruskal-Wallis (tie-adj.)	1.462857
van der Waerden	1.061074

Figure 5.1 illustrates the CAARs before and after the offering (SEO). There are positive insignificant CAARs at the days 9, 10 before the issuance. Furthermore, positive insignificant CAARs exist at the days 1,2,3,7 and 10 after the issuance. All these returns are not statistically significant, so investors can't take the advantage to achieve abnormal returns around SEOs.

Figure (5.1)
CAARs before and after the Issuing



5.5 Comparison with Previous Studies

Abu-Alhayja (2005) and Shahid *et al*. (2010) adopted the announcement day rather than the issuance day of SEOs. The results of this study which show negative significant CAARs up to 4 days before the issuance day are consistent with Abu-Alhayja (2005) results and have the same value in day 3 (-0.04), while days 4, 2 and 1 in both studies have negative signals with different values. Furthermore, there is a difference between the results of this study and the results of Abu-Alhayja (2005) study on the first 3 days after the event, since this study have positive values of CAARs while Abu-Alhayja (2005) study have negative values. The fourth day in this study has a negative value while in Abu-Alhayja (2005) study has a positive value.

A comparison with Shahid *et al*. (2010) results show that there is completely different results before the event except day 9 that have a positive signal in both studies, day 10 in Shahid *et al*. (2010) study have negative signal while in this study have positive signal. Also, the results of this study have negative CAARs for 8 days before the event which are significant only on the last four days while Shahid *et al*. (2010) results have positive significant CAARs. But there is a consistency with Shahid *et al*. (2010) results which show that there are no significant abnormal returns after the event. In day 1 after the event both studies have positive CAAR and in days 4, 5, 6, 8 and 9 both studies have negative CAARs.

On the other hand, our results are consistent with Lerskullawat (2011) results which show that the stock prices have negatively reacted to SEOs announcements. All CAARs values in his study before and after the event have negative signals which are similar to this study values that also have negative signals during the last 8 days before the event and negative signals on days 4, 5, 6, 8 and 9 after the event.

Chapter Six

Conclusions and Recommendations

6.1 Introduction.

6.2 Summary and Conclusions of Empirical Results.

6.3 Recommendations and Suggestions for Future Research.

Chapter Six

Conclusions and Recommendations

6.1 Introduction

This chapter will summarize the study as a whole and provides its conclusions and recommendations.

6.2 Summary and Conclusions of Empirical Results

The main objective of this study is to investigate the market reaction to SEOs on the short-run, looking for any statistically significant abnormal returns around SEOs for a sample of Jordanian financial and industrial firms which are listed in Amman stock exchange during the period from 2003 to 2012, and whether these returns are positive or negative.

In order to accomplish these objectives, daily returns (R) and daily abnormal returns (AR) are calculated. Also, average cumulative abnormal returns (CAARs) are calculated and tested via t-test and different non-parametric tests assuming non-normality.

The results of the study can be summarized as follows:

1. The Jordanian financial and industrial firms show significant negative average cumulated abnormal returns CAARs up to four days before SEOs.

2. The Jordanian financial and industrial firms show insignificant average cumulative abnormal returns up to 10 days after the SEOs.
3. The ASE reacts efficiently to SEOs.
4. There is no statistical significant difference between the CAARs before and after the SEOs.
5. Our results are robust to the normality assumption. Thus, both the parametric and non-parametric statistical tests show consistent results.

6.3 Recommendations and Suggestions for Future Research

1. For investors, investment strategies that are based on SEOs are not profitable on the short-run.
2. For insiders and stockholders, SEO could give them a bad signal because the stocks suffer from decline in prices before the issuance.
3. Further studies could take in regarding the reaction to SEOs for other sectors of Amman Stock Exchange.
4. Further studies could expand the window of the study to several months before and after SEOs.

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Appendices

Appendix (1)

*** Instructions of Issuance and Registration of Securities Law for the Year 2005**

The following articles are some of the important laws which are related to issuance, registration and regulations of securities that are drawn up by Jordan Securities Commission (www.jsc.gov.jo).

Article (3):

A- Every Issuer of securities in the Kingdom shall submit an application to the Commission for the registration of those securities in accordance with these Instructions.

B- The Board may reject the registration and issuance of any securities if it is found that the issuance might cause damage to the owners of the Issuer's securities or the investors in general.

Article (4):

A- The Issuer may, after registering its securities with the Commission, offer them for sale through:

1- Public offer for sale of securities, which is the bid directed to more than thirty persons.

2- Non-public offer for sale of securities, which is the bid directed to thirty persons or less.

B-The Issuer shall provide the Commission with all the documents related to the issuance process including the necessary approvals and decisions.

Article (5):

A- The public offer of securities shall come to pass through an effective prospectus, by an advertisement, the text of which, and the data and information included therein shall be approved by the Commission. The advertisement shall be published at least twice in two local daily newspapers, no less than seven days prior to the date set for the commencement of the subscription or sale.

B- No person shall make a public offer except through an effective prospectus.

C- The sale of securities that are part of a public offer shall not be binding upon the buyer unless the buyer first has received a copy of the effective prospects.

D- In the event of selling securities through non-public offer, the Issuer shall publish at least twice in two local daily newspapers about the data and information related to the issuance process, including the issuance value and the parties to which that issuance is allotted.

Article (6):

The public offer for the sale of securities shall include:

- Public Issuance: This is the offer by the Issuer to sell its new issues of securities, including the initial issues of shares and bonds.

- Public Subscription: This is the offer by the Issuer to sell its securities, by means other than public issuance, through making such shares available for trading on the market. This includes the shares resulting from the change of the legal capacity of the Issuer and the shares resulting from privatization of the public sector's enterprises and firms.

Article (7):

Public issuance of securities shall take place in one of the two following methods:

A- Subscription thereto by the public through banks according to the following:

1- Subscription shall take place on the subscription forms attached to the prospectus.

2- The banks at which the subscription takes place shall hand to the subscriber a copy of the prospectus before accepting the application for subscription.

3- Subscription shall take place according to the price stated in the prospectus and specified by the Issuer.

4- The minimum number of shares in a single application for subscription shall be between 100-500 shares, and this shall be stated in the prospectus.

5- The banks at which the subscription takes place shall ensure the correctness of the subscription processes and the competence of the subscriber according to the official documents.

B- The sale to the public according to the trading procedures in force in the market, subject to the following:

1- The purchasing broker shall hand his client the prospectus before accepting the purchase order.

2- The selling broker shall not sell securities exceeding the number to be issued which is indicated in the prospectus.

3- The sale procedures through the Market shall not be commenced except after completion of the registration procedures of the securities with the Centre and the procedures of their listing with the Market in accordance with the instructions in force.

4- The effective prospectus shall be considered as substitute for the information required for the purposes of listing the securities, and the Stock Exchange shall collect the other listing requirements in accordance with the procedures in force.

Article (8):

If the public issuance is directed to the firm’s shareholders, the entitlement to subscribe or purchase shall be for the shareholders as at the end of the 15th day from the date of the Commission’s approval of the registration of the securities concerned.

Appendix (2)

List of Financial Firms Conducting SEOs over the period 2003-2012

	Name of the Firm	Issuance Year
1	Ahli Bank	2005 2011
2	Arab East Financial Investment Corporation	2007 2008
3	Arab East Investment company	2005
4	Arab Bank	2005
5	Arab Jordan Investment Bank	2007
6	Arab Banking Corporation	2012
7	Bank of Jordan	2005
8	Capital Bank of Jordan	2005
9	International Brokerage and Financial Markets	2008
10	Jordan Islamic Bank for Finance and Investment	2006
11	Jordan Dubai Islamic Bank	2011 2012
12	Jordan Kuwait Bank	2006
13	Middle East Diversified Investment Company PLC	2009
14	The Housing Bank	2006
15	The Arab Assurers Insurance	2007
16	The Islamic Insurance Company	2006
17	The United Insurance	2008
18	Societe Generale de Banque- Jordan	2008

Appendix (3)

List of Industrial Firms Conducting SEOs over the period 2003-2012

	Name of the Firm	**Issuance Year**
1	Akary for Industries and Reak Estate Investments	2007
2	Al Quds Ready Mix	2005 2006
3	Arab Pesticides Veterinary Drugs Manufacturing Corporation	2006
4	El Zay Ready Wear Manufacturing	2008
5	Industrial Commercial and Agricultural Corporation	2005
6	Jordan Clothing Corporation PLC	2011
7	Jordan Dairy Corporation LTD	2006 2007
8	Jordan Industrial Resources	2005
9	Jordan Steel	2006 2008
10	Middle East Pharma and Chemical Industries and Medical Appliances	2005
11	Middle East Specialized Cables Corporation – Jordan	2009
12	National Cable and Wire Manufacturing Corporation	2006 2008
13	National Steel Industry Corporation LTD	2009
14	Ready Mix Concrete and Construction Supplies	2005
15	Rum Aladdin Industries Corporation	2005
16	Union Tobacco and Cigarette Industries	2005

بسم الله الرحمن الرحيم

(ملخص الدراسة)

رد فعل سوق الأسهم لإصدارات حقوق الملكية الموسمية: حالة بورصة عمان للأوراق المالية

إعداد الطالب

طارق زياد الزعبي

بإشراف

د. ديما وليد حنا الربضي

د. ديمة أحمد علي درادكة

نيسان ٢٤، ٢٠١٤

الهدف الرئيسي من هذه الدراسة هو البحث في رد فعل سوق الأسهم لإصدارات حقوق الملكية الموسمية على المدى القصير، من خلال البحث عن أي عائدات غير عادية ذات دلالة إحصائية حول هذه الإصدارات لعينة من الشركات المالية والصناعية الأردنية خلال الفترة من عام ٢٠٠٣ حتى عام ٢٠١٢، وإذا ما كانت هذه العوائد إيجابية أم سلبية.

استخدمت الدراسة أسعار الإغلاق لآخر أحد عشر يوما للتداول قبل وبعد الإصدار، لأسهم الشركات التي قامت بإصدار حقوق الملكية الموسمية بغض النظر إذا تم إيقاف التداول أم لا. وقد استخدمت الدراسة منهجية الحدث ومعادلة متوسط العائد التراكمي غير العادي (CAAR) لاختبار رد فعل سوق الأوراق المالية لإصدارات حقوق الملكية الموسمية لعينة نهائية ضمت ٥٠ إصدارا موسميا. وقد تم اختبار الأهمية الإحصائية للنتائج باستخدام الاختبارات المعلميّة واللامعلميّة.

نتائج الدراسة تشير إلى أنه لا توجد عائدات غير عادية ذات دلالة إحصائية في الأيام العشر التي تسبق وتلي يوم الإصدار، وهناك انخفاض ذو دلالة إحصائية في أسعار الأسهم في الأيام الأربعة التي تسبق يوم الإصدار. بالإضافة إلى ذلك، وجدت الدراسة أنه لا توجد فروق ذات دلالة إحصائية بين العوائد غير العادية قبل وبعد يوم الإصدار.

الكلمات المفتاحية: الإصدارات الموسمية، العوائد غير العادية، بورصة عمان للأوراق المالية، فرضية كفاءة السوق.